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## SEQUENCE LISTING

TECH CENTER 1600/2900

&lt;110&gt; VLAAMS INTERUNIVERSITAIR INSTITUUT VOOR BIOTECHNOL

&lt;120&gt; Peptides and nucleic acids derived from Eisenia foetida and the use thereof

&lt;130&gt; 2676-4432US

&lt;140&gt; US 09/596101

&lt;141&gt; 2000-06-16

&lt;150&gt; PCT/EP98/08169

&lt;151&gt; 1998-12-16

&lt;150&gt; 97203974.7

&lt;151&gt; 1997-12-17

&lt;160&gt; 3

&lt;170&gt; PatentIn version 3.0

&lt;210&gt; 1

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Eisenia fetida

&lt;400&gt; 1

Ser Gly Glu Ile Asp Ile Ile Glu Thr Ile Gly Asn Arg  
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&lt;210&gt; 2

&lt;211&gt; 1155

&lt;212&gt; DNA

&lt;213&gt; Eisenia fetida

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(1152)

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&lt;221&gt; sig\_peptide

&lt;222&gt; (1)..(51)

&lt;220&gt;

&lt;221&gt; mat\_peptide

&lt;222&gt; (52)..()

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-15

-10

-5

gcc ttc acc gac tgg gat caa tat cac atc gtc tgg cag gac gaa ttc  
96

Ala Phe Thr Asp Trp Asp Gln Tyr His Ile Val Trp Gln Asp Glu Phe

-1 1

5

10

15

gat tac ttt gat ggc gcg aag tgg caa cat gag gtc aca gca act ggc  
144

Asp Tyr Phe Asp Gly Ala Lys Trp Gln His Glu Val Thr Ala Thr Gly

20

25

30

gga ggg aac agc gaa ttc caa ctg tac aca cag gat ggg gcc aac agc  
192

Gly Gly Asn Ser Glu Phe Gln Leu Tyr Thr Gln Asp Gly Ala Asn Ser

35

40

45

ttc gtt cga gat gga aag ctt ttc att aag ccg acg ttg ctg gct gac  
240

Phe Val Arg Asp Gly Lys Leu Phe Ile Lys Pro Thr Leu Leu Ala Asp

50

55

60

aac atc aac cca cag acg ggt gcg cca ttt gga acc gat ttc atg tac  
288

Asn Ile Asn Pro Gln Thr Gly Ala Pro Phe Gly Thr Asp Phe Met Tyr

65

70

75

aat gga gtt cta gat gtc tgg gct atg tac ggg gcc tgc acg aat acg  
336

Asn Gly Val Leu Asp Val Trp Ala Met Tyr Gly Ala Cys Thr Asn Thr

80                                      85                                      90                                      95  
 gac aac aac gga tgc tac agg acg gga gcc gct ggc gac att cca ccg  
 384  
 Asp Asn Asn Gly Cys Tyr Arg Thr Gly Ala Ala Gly Asp Ile Pro Pro  
                                     100                                      105                                      110  
 gcc atg tcg gca cga gtt cga acc ttc cag aaa tac agc ttc acc cac  
 432  
 Ala Met Ser Ala Arg Val Arg Thr Phe Gln Lys Tyr Ser Phe Thr His  
                                     115                                      120                                      125  
 gga cgc gtt gtc gtt cac gcc aag atg ccc gtc gga gac tgg ctc tgg  
 480  
 Gly Arg Val Val Val His Ala Lys Met Pro Val Gly Asp Trp Leu Trp  
                                     130                                      135                                      140  
 cca gcc att tgg atg ttg ccg gag gat tgg gtc tat ggc gga tgg cct  
 528  
 Pro Ala Ile Trp Met Leu Pro Glu Asp Trp Val Tyr Gly Gly Trp Pro  
                                     145                                      150                                      155  
 cga tcg ggc gag atc gac atc att gaa aca atc ggc aac cga gat ttc  
 576  
 Arg Ser Gly Glu Ile Asp Ile Ile Glu Thr Ile Gly Asn Arg Asp Phe  
 160                                      165                                      170                                      175  
 aag aac act ggt gga gag ttc ctt gga att cag aag atg gga tca acg  
 624  
 Lys Asn Thr Gly Gly Glu Phe Leu Gly Ile Gln Lys Met Gly Ser Thr  
                                     180                                      185                                      190  
 atg cac tgg ggt cca gga tgg gac gac aac cga tac tgg ctg acc agc  
 672  
 Met His Trp Gly Pro Gly Trp Asp Asp Asn Arg Tyr Trp Leu Thr Ser

195

200

205

ctt ccg aaa cac tca gac gat tgg aac tac ggt gac aac ttc cac acg

720

Leu Pro Lys His Ser Asp Asp Trp Asn Tyr Gly Asp Asn Phe His Thr

210

215

220

ttc tgg ttc gac tgg agt ccc aac gga ctg agg ttc ttc gta gac gac

768

Phe Trp Phe Asp Trp Ser Pro Asn Gly Leu Arg Phe Phe Val Asp Asp

225

230

235

gag aac cag gct ctg ctc gat gtt cct tat cct ctg att gat gcg aat

816

Glu Asn Gln Ala Leu Leu Asp Val Pro Tyr Pro Leu Ile Asp Ala Asn

240

245

250

255

cca tgg tgg gtg gat ttc tgg gag tgg gga aag ccc tgg ctt cct caa

864

Pro Trp Trp Val Asp Phe Trp Glu Trp Gly Lys Pro Trp Leu Pro Gln

260

265

270

tac gaa aat gac aat cca tgg gct gga gga acg aac ctg gct ccc ttc

912

Tyr Glu Asn Asp Asn Pro Trp Ala Gly Gly Thr Asn Leu Ala Pro Phe

275

280

285

gac caa aat ttc cac ttc att ctg aac gtg gct gtc gga gga acg aac

960

Asp Gln Asn Phe His Phe Ile Leu Asn Val Ala Val Gly Gly Thr Asn

290

295

300


ggc ttc atc ccg gac ggt tgc atc aat cgc ggc gga gac ccg gcc ctg

1008

Gly Phe Ile Pro Asp Gly Cys Ile Asn Arg Gly Gly Asp Pro Ala Leu  
 305 310 315

cag aag ccg tgg agc aat ggg gac tgg tac aac gat gca atg agg aaa  
 1056  
 Gln Lys Pro Trp Ser Asn Gly Asp Trp Tyr Asn Asp Ala Met Arg Lys  
 320 325 330 335

ttc ttc gac gcc aga gga aac tgg aag tgg acg tgg gat gac gag gga  
 1104  
 Phe Phe Asp Ala Arg Gly Asn Trp Lys Trp Thr Trp Asp Asp Glu Gly  
 340 345 350

 gac aac aat gcc atg cag gtc gat tac atc cga gtc tac aag cgc aac  
 1152  
 Asp Asn Asn Ala Met Gln Val Asp Tyr Ile Arg Val Tyr Lys Arg Asn  
 355 360 365

tga  
 1155

<210> 3  
 <211> 384  
 <212> PRT  
 <213> Eisenia fetida

<400> 3

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 -15 -10 -5

Ala Phe Thr Asp Trp Asp Gln Tyr His Ile Val Trp Gln Asp Glu Phe  
 -1 1 5 10 15

Asp Tyr Phe Asp Gly Ala Lys Trp Gln His Glu Val Thr Ala Thr Gly  
 20 25 30

Gly Gly Asn Ser Glu Phe Gln Leu Tyr Thr Gln Asp Gly Ala Asn Ser  
35 40 45

Phe Val Arg Asp Gly Lys Leu Phe Ile Lys Pro Thr Leu Leu Ala Asp  
50 55 60

Asn Ile Asn Pro Gln Thr Gly Ala Pro Phe Gly Thr Asp Phe Met Tyr  
65 70 75

Asn Gly Val Leu Asp Val Trp Ala Met Tyr Gly Ala Cys Thr Asn Thr  
80 85 90 95

Asp Asn Asn Gly Cys Tyr Arg Thr Gly Ala Ala Gly Asp Ile Pro Pro  
100 105 110

Ala Met Ser Ala Arg Val Arg Thr Phe Gln Lys Tyr Ser Phe Thr His  
115 120 125

Gly Arg Val Val Val His Ala Lys Met Pro Val Gly Asp Trp Leu Trp  
130 135 140

Pro Ala Ile Trp Met Leu Pro Glu Asp Trp Val Tyr Gly Gly Trp Pro  
145 150 155

Arg Ser Gly Glu Ile Asp Ile Ile Glu Thr Ile Gly Asn Arg Asp Phe  
160 165 170 175

Lys Asn Thr Gly Gly Glu Phe Leu Gly Ile Gln Lys Met Gly Ser Thr  
180 185 190

Met His Trp Gly Pro Gly Trp Asp Asp Asn Arg Tyr Trp Leu Thr Ser  
195 200 205

Leu Pro Lys His Ser Asp Asp Trp Asn Tyr Gly Asp Asn Phe His Thr  
210 215 220

Phe Trp Phe Asp Trp Ser Pro Asn Gly Leu Arg Phe Phe Val Asp Asp  
 225 230 235

Glu Asn Gln Ala Leu Leu Asp Val Pro Tyr Pro Leu Ile Asp Ala Asn  
 240 245 250 255

Pro Trp Trp Val Asp Phe Trp Glu Trp Gly Lys Pro Trp Leu Pro Gln  
 260 265 270

Tyr Glu Asn Asp Asn Pro Trp Ala Gly Gly Thr Asn Leu Ala Pro Phe  
 275 280 285

Asp Gln Asn Phe His Phe Ile Leu Asn Val Ala Val Gly Gly Thr Asn  
 290 295 300

Gly Phe Ile Pro Asp Gly Cys Ile Asn Arg Gly Gly Asp Pro Ala Leu  
 305 310 315

Gln Lys Pro Trp Ser Asn Gly Asp Trp Tyr Asn Asp Ala Met Arg Lys  
 320 325 330 335

Phe Phe Asp Ala Arg Gly Asn Trp Lys Trp Thr Trp Asp Asp Glu Gly  
 340 345 350

Asp Asn Asn Ala Met Gln Val Asp Tyr Ile Arg Val Tyr Lys Arg Asn  
 355 360 365